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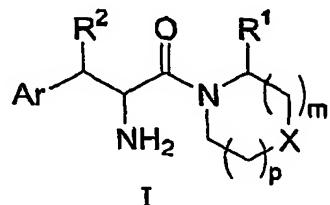
(54) Title: PHENYLALANINE DERIVATIVES AS DIPEPTIDYL PEPTIDASE INHIBITORS FOR THE TREATMENT OR PREVENTION OF DIABETES

(57) Abstract: The present invention is directed to phenylalanine derivatives which are inhibitors of the dipeptidyl peptidase-IV enzyme ("DP-IV inhibitors") and which are useful in the treatment or prevention of diseases in which the dipeptidyl peptidase-IV enzyme is involved, such as diabetes and particularly type 2 diabetes. The invention is also directed to pharmaceutical compositions comprising these compounds and the use of these compounds and compositions in the prevention or treatment of such diseases in which the dipeptidyl peptidase-IV enzyme is involved.

AMENDED CLAIMS

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1. A compound of structural formula I:



5 or a pharmaceutically acceptable salt thereof; wherein
 each n is independently 0, 1, or 2;
 m and p are independently 0 or 1;
 q is 1 or 2;

10 X is CH₂, S, CHF, or CF₂;

Ar is phenyl, unsubstituted or substituted with one to five R³ substituents;

15 R¹ is hydrogen;

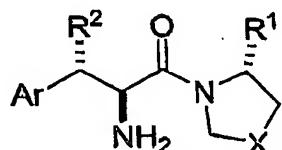
15 R² is selected from the group consisting of
 C₁₋₁₀ alkyl, wherein alkyl is unsubstituted or substituted with one to five substituents
 independently selected from halogen or hydroxy,
 C₂₋₁₀ alkenyl, wherein alkenyl is unsubstituted or substituted with one to five
 20 substituents independently selected from halogen or hydroxy,
 (CH₂)_n-aryl, wherein aryl is unsubstituted or substituted with one to five substituents
 independently selected hydroxy, halogen, CO₂H, C₁₋₆ alkyloxycarbonyl, C₁₋₆
 alkyl, and C₁₋₆ alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted
 with one to five halogens,
 25 (CH₂)_n-heteroaryl, wherein heteroaryl is unsubstituted or substituted with one to three
 substituents independently selected from hydroxy, halogen, CO₂H, C₁₋₆
 alkyloxycarbonyl, C₁₋₆ alkyl, and C₁₋₆ alkoxy, wherein alkyl and alkoxy are
 unsubstituted or substituted with one to five halogens,

[(tetrazol-5-yl)amino]carbonyl.

15. The compound of Claim 14 wherein R³ is selected from the group consisting of:

- 5 fluoro,
- chloro,
- bromo,
- trifluoromethyl,
- trifluoromethoxy, and
- 10 methoxy.

16. The compound of Claim 1 of the structural formula Ij



(Ij)

wherein X is CH₂, S, CHF, or CF₂;

- 15 Ar is phenyl, unsubstituted or substituted with one to five R³ substituents;
- R¹ is hydrogen;

R² is selected from the group consisting of

C₁₋₆ alkyl, wherein alkyl is unsubstituted or substituted with one to five substituents

- 20 independently selected from halogen or hydroxy,
- (CH₂)_n-C₃₋₆ cycloalkyl,
- COOH,
- COOC₁₋₆ alkyl, and

CONR⁴R⁵, wherein R⁴ and R⁵ are independently selected from the group consisting of hydrogen, tetrazolyl, thiazolyl, (CH₂)_n-phenyl, (CH₂)_n-C₃₋₆ cycloalkyl, and C₁₋₆ alkyl, wherein alkyl is unsubstituted or substituted with one to five halogens and wherein phenyl and cycloalkyl are unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C₁₋₆ alkyl, and C₁₋₆

alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens;

or R⁴ and R⁵ together with the nitrogen atom to which they are attached form a heterocyclic ring selected from pyrrolidine, piperidine, piperazine, and

5 morpholine wherein said heterocyclic ring is unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C₁-6 alkyl, and C₁-6 alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens; and

10 each R³ is independently selected from the group consisting of:

halogen,

C₁-6 alkyl, wherein alkyl is unsubstituted or substituted with one to five halogens,

C₁-6 alkoxy, wherein alkoxy is unsubstituted or substituted with one to five halogens,

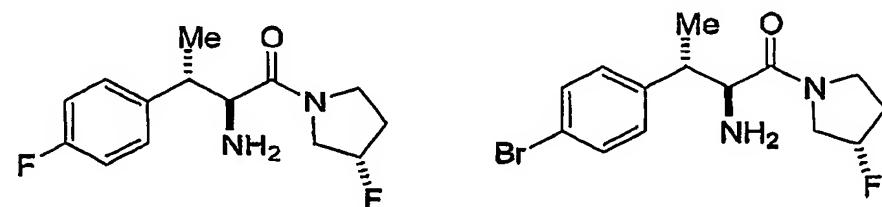
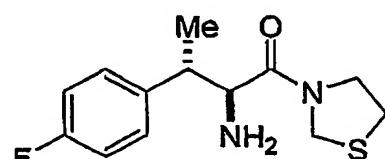
15 phenyloxy, unsubstituted or substituted with one to three substituents

independently selected from halogen and cyano, and
phenyl(CH₂)_nCON(Me)-, wherein phenyl is unsubstituted or
substituted with one to three substituents independently
selected from halogen, trifluoromethyl, and C₁-4 alkyl.

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17. The compound of Claim 16 of the structural formula selected from the group consisting of

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Statement under Article 19(1)

Claims 1, 16 and 17 of the international application have been amended to exclude compounds disclosed in WO 03/002530 cited in the International Search Report . The present amendment does not introduce new matter and is fully supported by Applicants' description. The present amendment has no impact on the description and the drawings of the International application.